

Three New Species of the Genus *Robertus* (Araneae: Theridiidae) from Japan

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吉田 哉¹⁾: 日本産モリヒメグモ属 (クモ目: ヒメグモ科) の 3 新種

Abstract Three new species of the family Theridiidae (Araneae) are described from Japan under the names, *Robertus saitoi*, *R. nipponicus* and *R. ogatai*.

In Japan, only one species of the genus *Robertus*, *R. sibiricus* ESKOV, 1987, is recorded from Rishiri-tô Island, northern Hokkaido (ONO *et al.*, 1991). Recently, I obtained some specimens of this genus collected by T. IRIE, K. OGATA, H. SAITO and myself. As the result of a close examination, the specimens are divided into three species recognized as new to science. They are described in this paper.

The holotypes and allotypes of the new species described in this paper are deposited in the collection of the National Science Museum (Natural History), Tokyo, and the paratypes are preserved in my private collection.

The abbreviations used in this paper are as follows: ALE, anterior lateral eye(s); AME, anterior median eye(s); MOA, median ocular area; PLE, posterior lateral eye(s); PME, posterior median eye(s).

Before going further, I wish to express my sincere thanks to Mr. Yasunosuke CHIKUNI, Nagano, Mr. Teruo IRIE, Kumamoto, Mr. Kiyoto OGATA, Aichi, and Mr. Hiroshi SAITO, Yamanashi, for offering valuable specimens and informations for the present study.

Robertus saitoi sp. nov.

(Figs. 1–4)

Male (holotype). Total length 2.89 mm. Carapace length 1.47 mm; width 1.08 mm. Abdomen length 1.55 mm; width 0.97 mm. First leg: femur 1.21 mm; patella and tibia 1.53 mm; metatarsus 0.84 mm; tarsus 0.58 mm. Second patella and tibia 1.26 mm; third patella and tibia 1.00 mm; fourth patella and tibia 1.53 mm.

Carapace oval. AME smaller than the others (5:8). AME their diameter apart and two-fifths from ALE. PME a half their diameter apart and five-eighths from PLE. ALE and PLE almost touching. Ratio of MOA, anterior width: posterior width: length=13:17:13. Chelicerae with three teeth on the anterior margin; middle one the largest. Abdomen cylindrical. Palpal organ as shown in Fig. 2: conductor and embolus thick; median apophysis concave with a large ventral

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Accepted December 7, 1995

projection; cymbium with a large paracymbial hook.

Coloration. Carapace and chelicerae brown. Eyes on the dark bases. Maxillae, labium and sternum brown; marginally dusky. Legs and palpi brown without flecks. Abdomen dusky brown with two pairs of brown impressed dots.

Female (allotype). Similar to male, but differs in the following points: Total length 3.53 mm. Carapace length 1.71 mm; width 1.45 mm. Abdomen length 2.08 mm; width 1.50 mm. First leg: femur 1.45 mm; patella and tibia 1.61 mm; metatarsus 0.89 mm; tarsus 0.58 mm. Second patella and tibia 1.34 mm; third patella and tibia 1.08 mm; fourth patella and tibia 1.63 mm.

Diameters in ratio, AME: ALE: PME: PLE=6: 8: 7: 8. AME two-thirds their diameter apart and from ALE. PME six-sevenths their diameter apart and from PLE. Ratio of MOA, anterior width: posterior width: length=7: 9: 8. Basal color darker than that of male. Genital organ as shown in Figs. 3–4: duct thick and short.

Type series. Holotype: ♂, and allotype: ♀, Watarase-yûsuichi, Fujioka-machi, Tochigi Prefecture, Japan, 25–V–1984, H. SAITO leg., (NSMT–Ar 3313–3314). Paratype: 1 ♀, same data as for the holotype.

Distribution. Honshu (Tochigi Prefecture).

Remarks. This species resembles *Robertus neglectus* (O. PICKARD-CAMBRIDGE, 1871) (*cf.* WIEHLE, 1937; ROBERTS, 1985), but is distinguished from the latter by the male palpus with large conductor and embolus. The present new species is also similar to *R. nipponicus* sp. nov. and *R. ogatai* sp. nov. in general appearances, but is distinguishable from *nipponicus* by the median apophysis of the male palpus with only one ventral projection, and from *ogatai* by the conductor and embolus of the male palpus thick, and the female genitalia with thick and short duct.

One species of the genus *Robertus*, *R. sibiricus* ESKOV, 1987 described from Russia, is recorded from Japan, but *R. sibiricus* is distinguished from the three new species described in this paper by the cymbium of the male palpus with two stout apical macrosetae, and the genital organ.

Etymology. The specific name is after Mr. Hiroshi SAITO, Yamanashi.

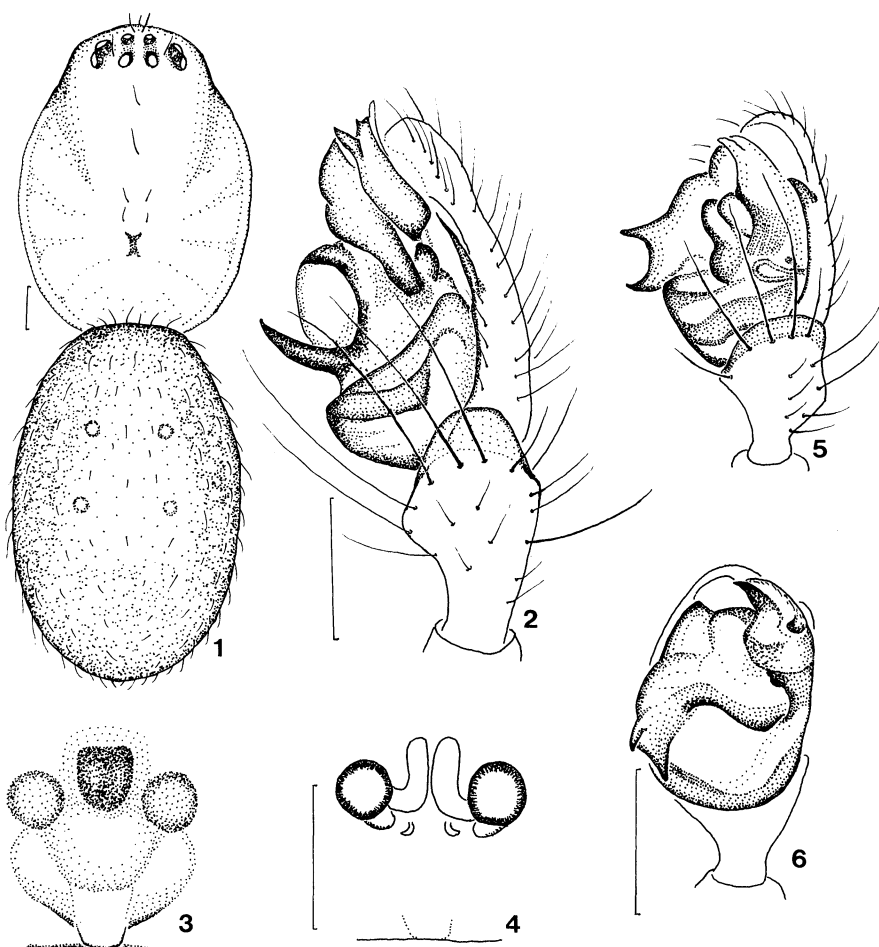
***Robertus nipponicus* sp. nov.**

(Figs. 5–6)

Male (holotype). Total length 2.05 mm. Carapace length 1.13 mm; width 0.84 mm. Abdomen length 1.00 mm; width 0.84 mm. First leg: femur 0.89 mm; patella and tibia 1.05 mm; metatarsus 0.55 mm; tarsus 0.42 mm. Second patella and tibia 0.89 mm; third patella and tibia 0.71 mm; fourth patella and tibia 1.05 mm.

Carapace oval. Diameters in ratio, AME: ALE: PME: PLE=3: 5: 6: 7. AME four-thirds their diameter apart and one from ALE. PME two-thirds their diameter apart and five-sixths from PLE. ALE and PLE almost touching. Ratio of MOA, anterior width: posterior width: length=10: 13: 11. Chelicerae with three teeth on the anterior margin; basal one largest. Abdomen cylindrical. Palpal organ as shown in Figs. 5–6: median apophysis concave with two large ventral projections; cymbium with a large paracymbial hook.

Coloration. Carapace, chelicerae, maxillae, labium and sternum brown; marginally dusky. Eyes on the dark bases. Legs and palpi brown without flecks.



Figs. 1–6. 1–4, *Robertus saitoi* sp. nov. — 1, Male carapace and abdomen, dorsal view; 2, male palpus, lateral view; 3, epigynum, ventral view; 4, female genitalia, dorsal view. 5–6, *R. nipponicus* sp. nov. — 5, Male palpus, lateral view; 6, same, ventral view. (Scales: 0.2 mm.)

Abdomen dusky brown with two pairs of brown impressed dots; venter grayish brown.

Type specimen. Holotype: ♂, Ikeda, Kumamoto-shi, Kumamoto Prefecture, Japan, 10–VI–1985, T. IRIE leg., (NSMT–Ar 3315).

Distribution. Kyushu (Kumamoto Prefecture).

Remarks. This species resembles *Robertus neglectus* (O. PICKARD-CAMBRIDGE, 1871), *R. saitoi* sp. nov. and *R. ogatai* sp. nov., but is distinguished from the others by the median apophysis of the male palpus concave with two large ventral projections, and the small size.

Etymology. The specific name is after Japan (Nippon).

Robertus ogatai sp. nov.

(Figs. 7-10)

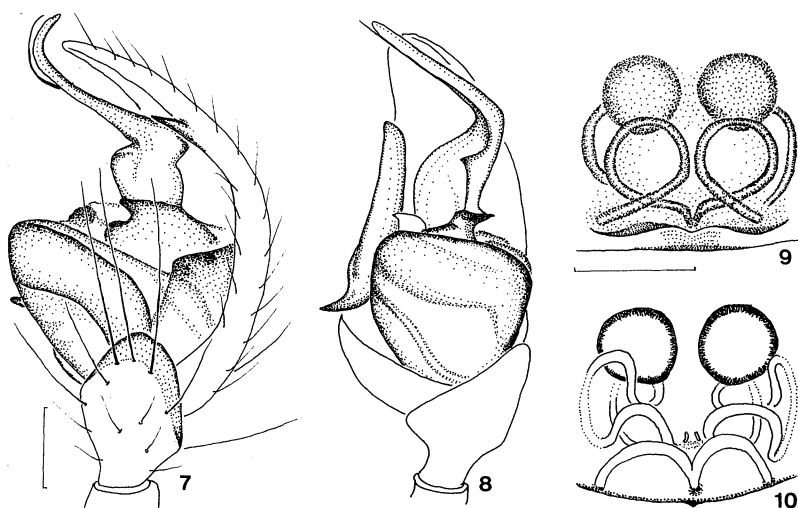
Male (holotype). Total length 2.97 mm. Carapace length 1.42 mm; width 1.05 mm. Abdomen length 1.55 mm; width 1.26 mm. First leg: femur 1.18 mm; patella and tibia 1.39 mm; metatarsus 0.74 mm; tarsus 0.58 mm. Second patella and tibia 1.13 mm; third patella and tibia 0.92 mm; fourth patella and tibia 1.39 mm.

Carapace oval. AME smaller than the others (5: 8). AME their diameter apart and four-fifths from ALE. PME three-fourths their diameter apart and from PLE. ALE and PLE almost touching. Ratio of MOA, anterior width: posterior width: length=13: 18: 15. Chelicerae with three teeth on the anterior margin; middle one largest. Abdomen cylindrical. Palpal organ as shown in Figs. 7-8: conductor and embolus thin and long; median apophysis with a diatal and a ventral large projections; cymbium with a large paracymbial hook.

Coloration. Carapace, chelicerae, maxillae, labium and sternum brown; marginally dusky. Eyes on the dark bases. Legs and palpi brown without flecks. Abdomen dusky brown with two pairs of brown impressed dots.

Female (allotype). Similar to male, but differs in the following points: Total length 3.50 mm. Carapace length 1.39 mm; width 1.00 mm. Abdomen length 2.11 mm; width 1.68 mm. First leg: femur 1.08 mm; patella and tibia 1.26 mm; metatarsus 0.63 mm; tarsus 0.42 mm. Second patella and tibia 1.00 mm; third patella and tibia 0.87 mm; fourth patella and tibia 1.26 mm.

Diameters in ratio, AME: ALE: PME: PLE=5: 6: 6: 7. AME four-fifths their diameter apart and one from ALE. PME five-sixths their diameter apart and one from PLE. Ratio of MOA, anterior width: posterior width: length=12: 15: 11.



Figs. 7-10. *Robertus ogatai* sp. nov. — 7, Male palpus, lateral view; 8, same, ventral view; 9, epigynum, ventral view; 10, female genitalia, dorsal view. (Scales: 0.2 mm.)

Abdomen grayish brown. Genital organ as shown in Figs. 9–10: duct very long.

Type series. Holotype: ♂, and allotype: ♀, Unryû-keikoku, Nikko-shi, Tochigi Prefecture, Japan, 25-V-1984, H. SAITO leg., (NSMT-Ar 3316–3317). Paratypes: 1♀, same data as for the holotype; 1♂, Wakahata-numa, Obanazawa-shi, Yamagata Prefecture, Japan, 10-VIII-1986, H. YOSHIDA leg.; 1♂, 1♀, Shiojidaire 1,400 m alt., Mt. Kosumo-san, Iijima-machi, Nagano Prefecture, Japan, 11-X-1987, K. OGATA leg.

Distribution. Honshu (Yamagata, Tochigi and Nagano Prefectures).

Remarks. This species resembles *Robertus neglectus* (O. PICKARD-CAMBRIDGE, 1871), *R. saitoi* sp. nov. and *R. nipponicus* sp. nov., but is distinguished from the others by the male palpus with thin and long conductor and embolus, and the female genitalia with very long duct.

Etymology. The specific name is after Mr. Kiyoto OGATA, Aichi.

摘 要

日本産のモリヒメグモ属（ヒメグモ科）の3新種 *Robertus saitoi* sp. nov. サイトウモリヒメグモ（新称），*R. nipponicus* sp. nov. ミナミモリヒメグモ（新称），*R. ogatai* sp. nov. オガタモリヒメグモ（新称）を記載した．北海道利尻島から *R. sibiricus* ESKOV, 1987 キタモリヒメグモが記録されている．本属の記録は日本産として今回が2番目である．

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